PHILIPS

Xitanium

LED driver


Datasheet

# Xitanium non-isolated Fixed Output

## Xitanium 60W 0.08-0.35A 300V 16 230V

### 9290 015 57706

**Xitanium non-isolated Fixed Output drivers stand on three pillars: quality of light, reliability and flexibility**

By using Xitanium LED drivers in your luminaires, you can be sure to offer your customers high quality of light without visual flicker and stroboscopic effects.

The reliability of your complete lighting system is enhanced as our drivers offer specific features that protect the connected LED module, including reduced ripple current.

Finally, application-oriented operating windows offer the flexibility required to provide the stable lumen output and light quality levels that lighting specifiers and architects demand.

**Benefits**

- High quality of light
- High reliability
- Future-proof flexibility
- Fast and easy wireless programming with SimpleSet (if applicable)

**Features**

- High efficiency
- Wide operating windows - output current can be adjusted via SimpleSet (NFC) or LEDset (resistor)
- Low output ripple current

**Application**

- Offices
- Industry
- Retail: supermarkets, shopping malls

August 2021

## Electrical input data

| Specification item | Value | Unit | Condition |
|---|---|---|---|
| Rated input voltage range | 220…240 | $V_{ac}$ | Performance range |
| Rated input voltage | 230 | $V_{ac}$ | |
| Rated input frequency range | 50…60 | Hz | Performance range |
| Rated input current | 0.3 | A | @ max output power @ rated input voltage |
| Rated input power | 66 | W | @ max output power @ rated input voltage |
| Power factor | 0.9 | | @ rated output power @ rated input voltage |
| Total harmonic distortion | 20 | % | @ rated output power @ rated input voltage |
| Efficiency | 92.2 | % | @ max. output power @ rated input voltage @ max. Uout |
| Rated input voltage DC range | 186…250 | $V_{dc}$ | Performance range |
| Input voltage AC range | 198…264 | $V_{ac}$ | Operational range |
| Input frequency AC range | 45…66 | Hz | Operational range |
| Input voltage DC range | 168…275 | $V_{dc}$ | Operational range |
| Isolation input to output | No | | |

## Electrical output data

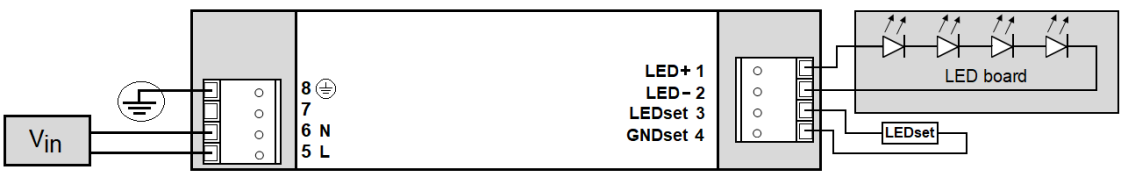
| Specification item | Value | Unit | Condition |
|---|---|---|---|
| Regulation method | Constant Current | | |
| Output voltage | 100…300 | $V_{dc}$ | |
| Output voltage max. | 330 | V | Maximum output voltage (rms) |
| Output current | 0.08…0.35 | A | |
| Output current tolerance ± | 5 | % | |
| Output current ripple LF | ≤ 4 | % | Ripple = peak / average, < 3kHz |
| Output current ripple HF | ≤ 4 | % | |
| Output $P_{st}^{LM}$ | ≤ 0.02 | | |
| Output SVM | ≤ 0.08 | | |
| Output power | 17…60 | W | |

## Electrical data controls input

| Specification item | Value | Unit | Condition |
|---|---|---|---|
| Control method | Fixed | | |

## Wiring and Connections

| Specification item | Value | Unit | Type |
|---|---|---|---|
| Input wire cross-section | 0.5…1.5 / 20…16 | $mm^2$ / AWG | WAGO744, solid wire |
| Input wire strip length | 8…9 | mm | |
| Output wire cross-section | 0.5…1.5 / 20…16 | $mm^2$ / AWG | WAGO744, solid wire |
| Output wire strip length | 8…9 | mm | |
| Maximum cable length | 2 | m | Total length of wiring including LED module, one way. For longer wiring please double check EMI behavior of luminaire. |

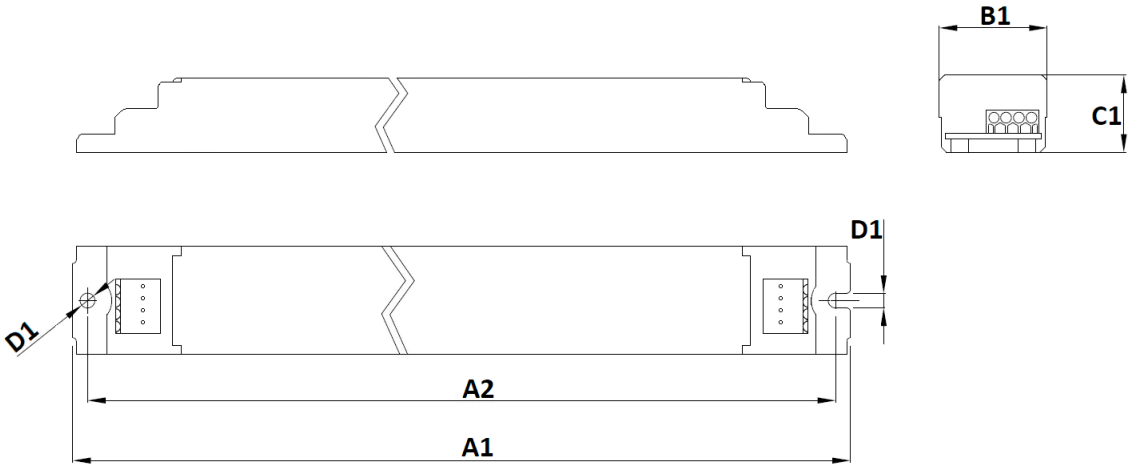


## Insulation

| Insulation per IEC61347-1 | Input | Output+LEDset | Housing |
|---|---|---|---|
| Input | | No | Basic |
| Output+LEDset | No | | Basic |
| Housing | Basic | Basic | |

## Dimensions and weight

| Specification item | Value | Unit | Tolerance (mm) |
|---|---|---|---|
| Length (A1) | 280 | mm | |
| Mounting hole distance (A2) | 270 | mm | |
| Width (B1) | 30 | mm | |
| Height (C1) | 16 | mm | |
| Mounting hole diameter (D1) | 4.1 | mm | |
| Weight | 164 | gram | |




## Logistical data

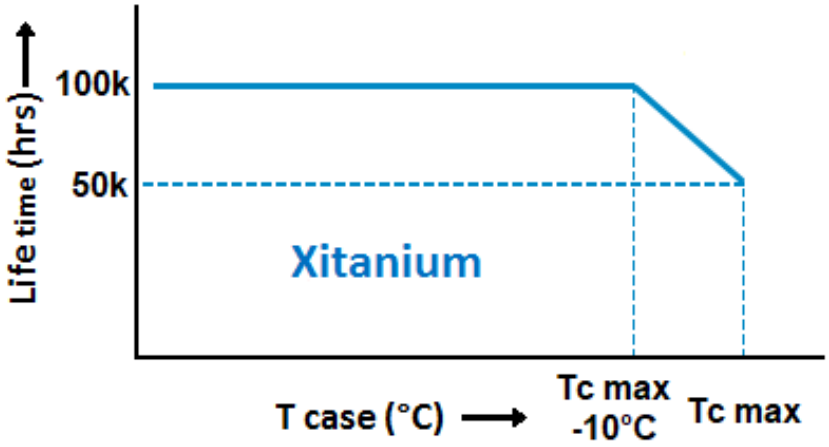
| Specification item | Value |
|---|---|
| Product name | Xitanium 60W 0.08-0.35A 300V 16 230V |
| EOC | 871869670595700 |
| Logistic code 12NC | 9290 015 57706 |
| EAN1 (GTIN) | 8718696705957 |
| EAN3 (box) | 8718696705964 |
| Pieces per box | 24 |

## Operational temperatures and humidity

| Specification item | Value | Unit | Condition |
|---|---|---|---|
| Ambient temperature | -25…+50 | °C | Higher ambient temperature allowed as long as Tcase-max is not exceeded |
| Tcase-max | 75 | °C | Maximum temperature measured at $T_{case}$-point |
| Tcase-life | 65 | °C | lifetime 100khrs; measured at $T_c$-point |
| Maximum housing temperature | 110 | °C | In case of a failure, inherent by design |
| Relative humidity | 10…90 | % | Non-condensing |

## Lifetime

| Specification item | Value | Unit | Condition |
|---|---|---|---|
| Driver lifetime | 100,000 | hours | Measured temperature at Tcase-point is Tcase-life. Maximum failures = 10% |
| Mains switching cycles | > 100,000 | switches | See Design-in guide for detailed explanation |




## Storage temperature and humidity

| Specification item | Value | Unit | Condition |
|---|---|---|---|
| Ambient temperature | -40...+85 | °C | |
| Relative humidity | 5...95 | % | Non-condensing |

## Programmable features

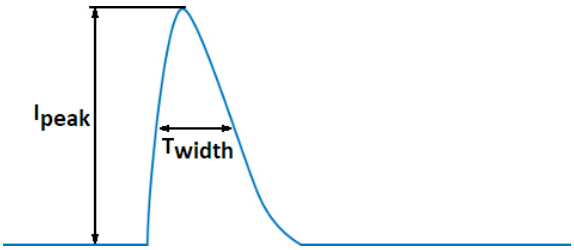
| Specification item | Available | Default setting | Condition |
|---|---|---|---|
| Set Adjustable Output Current (AOC) | LEDset | 80 mA | Set the output current via LEDset, do not leave open / short-circuit. See Design-In Guide for resistor value table. |
| Constant Light Output (CLO) | No | | |
| Corridor Mode | No | | |
| DC emergency (DCemDim) | No | | |

## Features

| Specification item | Value | | Condition |
|---|---|---|---|
| Open load protection | Yes | | Automatic recovering |
| Short circuit protection | Yes | | Automatic recovering |
| Over power protection | Yes | | Automatic recovering |
| Hot wiring | No | | |
| Suitable for fixtures with protection class | I | | per IEC60598 |
| Energy metering (DALI part 252) | No | | |
| Diagnostics | No | | |

## Inrush current

| Specification item | Value | Unit | Condition |
|---|---|---|---|
| Inrush current | 18.1 | A | Input voltage 230V |
| Inrush peak width | 256 | µs | Input voltage 230 V, measured at 50% height |
| Drivers / MCB 16A type B | ≤ 26 | pcs | Indicative value |




Please refer to the driver design in guide if you use other MCB-types.

## Driver touch current / protective conductor current

| Specification item | Value | Unit | Condition |
|---|---|---|---|
| Typical Protective Conductor Current (ins. Class I) | 0.5 | mA rms | Acc. IEC60598-1. LED module contribution not included |

## Surge immunity

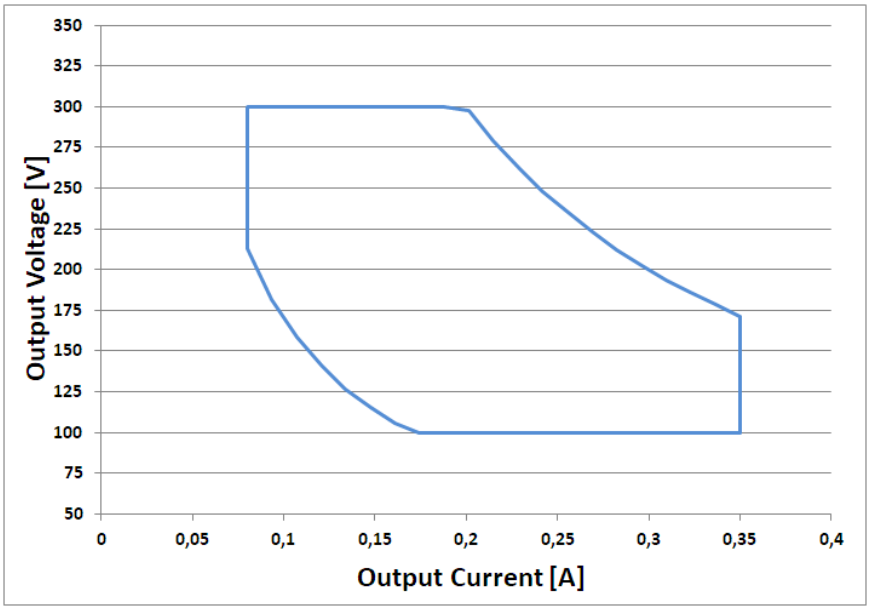
| Specification item | Value | Unit | Condition |
|---|---|---|---|
| Mains surge immunity (diff. mode) | 1 | kV | Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us |
| Mains surge immunity (comm. mode) | 2 | kV | Acc. IEC61000-4-5. 12 Ohm, 1.2/50us, 8/20us |

## Application Info

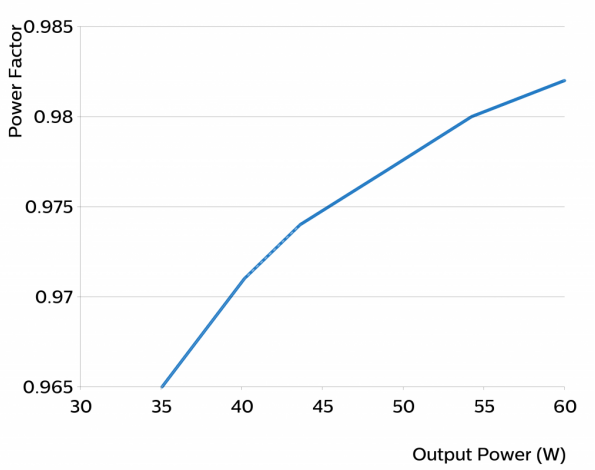
| Specification item | Value |
|---|---|
| Approval marks | CCC / CE / EL / ENEC |
| Ingress Protection classification (IP) | 20 |
| Application | Indoor Linear |
| Mounting Type | Built-in |

## Graphs

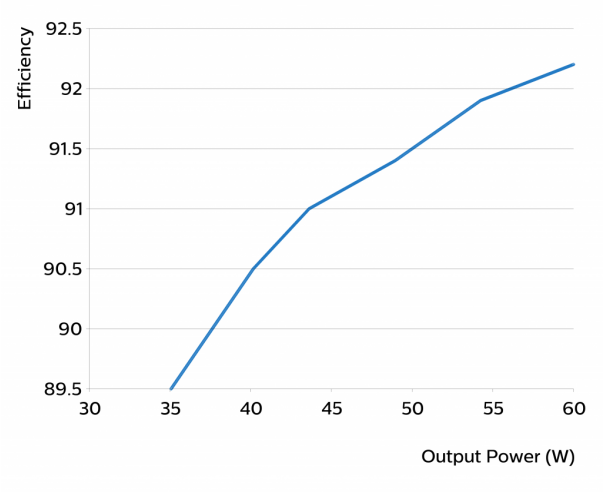
### Operating window



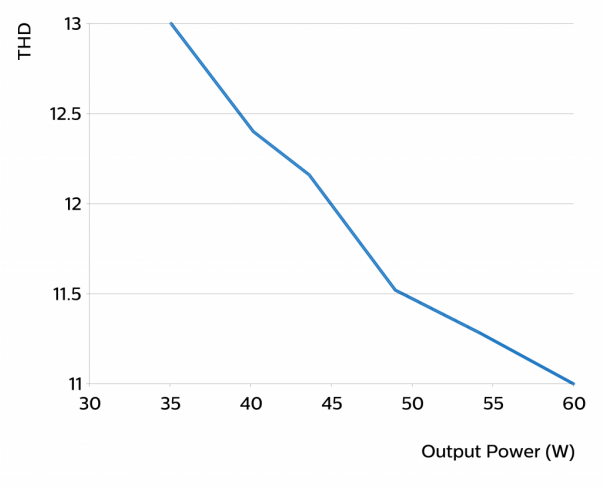

### Power factor versus output power



## Efficiency versus output power




## THD versus output power





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